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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/798,495	03/10/2004	Arthur Geringer	744-27-035	6317
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KOPPEL, PATRICK & HEYBL 555 ST. CHARLES DRIVE SUITE 107 THOUSAND OAKS, CA 91360			EXAMINER SCHRODE, WILLIAM THOMAS	
			ART UNIT	PAPER NUMBER

DATE MAILED: 07/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/798,495

Applicant(s)

GERINGER ET AL.

Examiner

William Schrode

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29,31 and 32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29,31,32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: Examiner's Attachment.

DETAILED ACTION

This action is in response to amendments filed on 04/04/06. Claims 1-29, 31 and 32 are pending. Claim 30 is canceled.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

In regard to claim 31, Zehrung in view of Otto teaches the solenoid assembly, Zehrung discloses a solenoid assembly wherein the plunger has first and second plunger ends (54 and 56), the rod/tip assembly capable of being mounted to the first end of the plunger and capable of being mounted to the second end of the plunger.

In regard to claim 32, Zehrung in view of Otto teaches the electric door lock, Otto discloses the solenoid assembly wherein the solenoid spring is a conical spring.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7, 14-15, 29, 31 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zehrung (US 6,732,557) in view of Otto, III et al (5,487,289). Zehrung discloses an electric door lock. In regard to claims 1 and 29, Zehrung discloses a electric door lock comprising of a housing (20A) for receiving the internal components of the door lock; a latch bolt (44A) mounted within said housing and being movable between partially extended from and retracted into the housing; a door knob (attached to 48A) mounted to the housing and rotatable to retract the latch bolt; and a solenoid assembly (18) mounted within the housing that can be interchangeably arranged to cause the lock to operate a fail secure mode wherein said doorknob is prevented from retracting the latch bolt when the solenoid is not energized, or a fail safe mode wherein the doorknob is allowed to retract the latch bolt when the solenoid is not energized, a solenoid body having a longitudinal bore (As shown in Fig. 3A), a plunger movably arranged with in the longitudinal bore and drawn into the solenoid housing when energized, a rod/tip assembly mounted to the plunger (54A), and the solenoid nested in place within the housing in both modes, the solenoid assembly allows operation in fail safe and fail secure modes.

Although Zehrung fails to teach a coil surrounding the longitudinal bore and an electrical conductor to apply an electrical signal coil; a plunger movably arranged when the coil is energized, Zehrung's solenoid is energized and the plunger is movably arranged in the solenoid body. It would have been obvious to one having ordinary skill that Zehrung's solenoid includes a coil that is energized, and a electrical conductor to

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create the electrical signal, since it is well known in the art that the a solenoid uses a coil to create a electromagnetic force in order to move the plunger.

Zehrung fails to teach the solenoid assembly having a solenoid spring mounted between the rod/tip assembly and the solenoid body, the solenoid spring compressed when the plunger is drawn into the solenoid body, the solenoid spring urging the rod/tip assembly to extend from the solenoid body when not energized, the spring having a spring rate and said solenoid assembly having a power curve, the spring rate of said solenoid spring substantially matching the power curve of the solenoid assembly.

Otto shows that is in known in the art to construct a solenoid to include a solenoid spring (57) mounted between the rod/tip assembly and the solenoid body, the solenoid spring compressed when the plunger is drawn into the solenoid body, the solenoid spring urging the rod/tip assembly to extend from the solenoid body when not energized. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Zehrung's lock as taught by Otto, since such a modification aids in overcoming the attractive forces.

Although Otto fails to teach the spring having a spring rate and the solenoid assembly having a power curve, the spring rate of the solenoid spring substantially matching the power curve of the solenoid assembly, Otto teaches the structural limitations of a conical spring and a solenoid requiring power. Therefore, Otto teaches the functional limitations of the relationship between the conical spring and the power of the solenoid, thus the claimed limitations are met.

In regard to claim 2, Zehrung in view of Otto teaches the electric door lock, Zehrung discloses a electric door lock comprising a cradle (10) mounted to the housing (at 39), the solenoid being nested in place within the housing by being mounted within the cradle, the solenoid being held in place by surface of the cradle and the surfaces of the housing.

In regard to claim 3, Zehrung in view of Otto teaches the electric door lock, Zehrung discloses an electric door lock wherein the solenoid is nested within the housing without being directly affixed to the housing.

In regard to claim 4, Zehrung in view of Otto teaches the solenoid assembly, Zehrung discloses an electric door lock wherein the solenoid assembly comprises a solenoid body (22), a plunger (24) and a rod/tip assembly (54A), the plunger mounted within and fully drawn into the solenoid body when the solenoid assembly is energized, the rod/tip assembly capable of being mounted to either end of the plunger to interchange the solenoid assembly between fail safe and fail secure modes (column 3, lines 40-45).

In regard to claim 5, Zehrung in view of Otto teaches the electric lock, Zehrung discloses an electric lock wherein the plunger and rod/tip assemblies operate on the lock internal components to allow operation in the fail-safe or fail secure modes.

In regard to claim 6, Zehrung in view of Otto teaches the electric lock, Otto discloses an electric lock wherein the solenoid spring (57) to provide a bias to urge the plunger to extend from the solenoid body when the solenoid assembly is not energized.

In regard to claim 7, Zehrung in view of Otto teaches the electric lock, Otto discloses an electric lock wherein the spring is arranged between solenoid body (54) and the rod and tip assembly (40), the spring being compressed between the solenoid body and rod/tip assembly when the solenoid assembly is energized to draw in the plunger.

In regard to claim 14, Zehrung in view of Otto teaches the electric lock, Zehrung discloses an electric door lock comprising a hub mechanism (B1 and B2, See Examiner's Attachment) with the doorknob mounted thereto and the latch bolt comprises a latch retractor (F, See Examiner's Attachment), the hub mechanism also comprises a latch bolt finger to engage the latch bolt wherein the latch bolt finger (B2, See Examiner's Attachment) floats on top of the latch retractor.

In regard to claim 15, Zehrung in view of Otto teaches the electric lock, Zehrung discloses an electric door lock wherein the latch bolt comprises a one-piece retractor to prevent damage to the lock internal components when the doorknob is forcibly turned.

In regard to claim 31, Zehrung in view of Otto teaches the solenoid assembly, Zehrung discloses a solenoid assembly wherein the plunger has first and second plunger ends (54 and 56), the rod/tip assembly capable of being mounted to the first end of the plunger and capable of being mounted to the second end of the plunger.

In regard to claim 32, Zehrung in view of Otto teaches the electric door lock, Otto discloses the solenoid assembly wherein the solenoid spring is a conical spring.

Claims 1, 8-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kambic (US 4,429,556) in view of Otto. Kambic discloses an electric door lock. In

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regard to claim 1, Kambic discloses an electric door lock comprising of a housing (32) for receiving the internal components of the door lock; a latch bolt (22) mounted within said housing and being movable between partially extended from and retracted into the housing; a door knob (110) mounted to the housing and rotatable to retract the latch bolt; and a solenoid assembly (172) mounted within the housing that can be interchangeably arranged to cause the lock to operate a fail secure mode wherein said doorknob is prevented from retracting the latch bolt when the solenoid is not energized, or a fail safe mode wherein the doorknob is allowed to retract the latch bolt when the solenoid is not energized, the solenoid nested in place within the housing in both modes.

Kambic fails to teach the spring having a spring rate and the solenoid assembly having a power curve, the spring rate of the solenoid spring substantially matching the power curve of the solenoid assembly.

Otto shows that is known in the art to construct a solenoid using a conical spring. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Zehrunig's lock as taught by Otto, since a conical springs can conform to different shaped solenoids and rod/tips.

Although Otto fails to teach the spring having a spring rate and the solenoid assembly having a power curve, the spring rate of the solenoid spring substantially matching the power curve of the solenoid assembly, Otto teaches the structural limitations of a conical spring and a solenoid requiring power. Therefore, Otto teaches

the functional limitations of the relationship between the conical spring and the power of the solenoid, thus the claimed limitations are met.

In regard to claim 8, Kambric in view of Otto teaches the electric door lock, Kambric discloses an electric door lock comprising a hub mechanism (24) within the door knob mounted thereto and a coupling member (144), the coupling member movable between a first coupling position to allow the hub mechanism to rotate when the doorknob is rotated or a second coupling position wherein the hub mechanism is not allowed to rotate when the doorknob is rotated, the hub mechanism retracting the latch bolt when the hub mechanism is rotated.

In regard to claim 9, Kambric in view of Otto teaches the electric door lock, Kambric discloses an electric door lock wherein the solenoid is in the fail-safe mode (column 8, lines 58-68) and causes the coupling member to be in the first position when the solenoid assembly is not energized.

In regard to claim 10, Kambric in view of Otto teaches the electric door lock, Kambric discloses an electric door lock wherein the solenoid assembly is in the fail secure mode (column 8, lines 51-57) and causes the coupling member to be in the second position when the solenoid assembly is not energized.

In regard to claim 11, Kambric in view of Otto teaches the electric door lock, Kambric discloses an electric door lock comprising a locking lever (168) operably arranged between the solenoid assembly and the coupling mechanism, the solenoid assembly causing the movement of the locking lever between first and second locking

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lever positions, the movement of the locking lever causing the coupling mechanism to move between the first and second coupling positions.

In regard to claim 12, Kambric in view of Otto teaches the electric door lock, Kambric discloses an electric door lock comprising a rocker arm (160) operably arranged between the locking lever and the coupling member, the movement of the locking lever between the first and second locking lever positions causing the rocker arm to be moved between first and second rocker arm position, thereby causing the coupling member to move between the first and second coupling positions.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kambric in view of Otto further in view of Bruwer et al. (US 6,539,755). Kambric in view of Otto teaches the electric door lock, Kambric discloses the claimed electric door lock except for comprising of a plurality of electrical switches to indicate the position of the lock internal components. Bruwer teaches that it is known to construct an electric door lock comprising a plurality of electrical switches (434, 436, 440, 444) to indicate the position of the lock internal components. It would have been obvious to one having ordinary skill in the art at the time the invention was made to construct an electric door lock comprising of a plurality of electrical switches to indicate the position of the lock internal components as taught by Bruwer, since Bruwer states column 4, lines 5-6 that such a modification would that it would be possible to actuate the lock electronically or by means of a mechanical key.

Claim 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zehrung (US 6,732,557) in view of Otto further in view of Foshee (4,726,613). In regard

to claim 16, Zehrung discloses the claimed door lock except the latch bolt comprises a retractor that melts at an elevated temperature so that the latch bolt cannot thereafter be retracted. Foshee teaches that it is known to construct a latch that includes a part that melts at an elevated temperature so that the latch bolt cannot thereafter be retracted. It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the latch bolt retractor capable of melting so that the latch bolt cannot thereafter be retracted as taught by Foshee, since such a modification is well known in the art and would provide a door lock, whereby when a fire occurs, the door lock is urged by high temperature of the fire to hold a latch bolt at a position for fastening the door lock, so that a door mounted with door lock is prevented from being opened during the fire, and spreading of the fire can be confined so as to minimize fire-induced damage.

Claim 17-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zehrung (US 6,732,557) in view of Foshee. In regard to claim 17, Zehrung teaches the electric door lock that is interchangeable between fail safe and fail secure modes, comprising a housing (As shown in Fig. 3A) for receiving the internal components of the door lock; a latch bolt (44A) mounted within said housing and being movable between partially extended from the retracted into the housing; a door knob (attached to 48A) mounted to the housing and rotatable to retract the latch bolt into; and a solenoid assembly comprising a solenoid body (22), a plunger and a rod/tip assembly (54A), the plunger movably mounted within and drawn into the solenoid body when the solenoid assembly is energized, the rod/tip assembly capable of being mounted to either end of

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the plunger to interchange the solenoid assembly between fail safe and fail secure modes (column 40-45). Zehrunge fails to teach the latch bolt comprises a retractor that melts at an elevated temperature so that the latch bolt cannot thereafter be retracted.

Foshee teaches that it is known to construct a latch that includes a part that melts at an elevated temperature so that the latch bolt cannot thereafter be retracted. It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the latch bolt retractor capable of melting so that the latch bolt cannot thereafter be retracted as taught by Foshee, since such a modification is well known in the art and would provide a door lock, whereby when a fire occurs, the door lock is urged by high temperature of the fire to hold a latch bolt at a position for fastening the door lock, so that a door mounted with door lock is prevented from being opened during the fire, and spreading of the fire can be confined so as to minimize fire-induced damage.

In regard to claim 18, Zehrunge in view of Lin teaches the door lock, Zehrunge discloses a door lock wherein the plunger and rod/tip assembly are arranged in the fail secure mode wherein the doorknob is prevented from retracting the latch bolt when the solenoid body is not energized.

In regard to claim 19, Zehrunge in view of Lin teaches the door lock, Zehrunge discloses a door lock wherein the plunger and rod/tip assembly are arranged in the fail-safe mode wherein the doorknob is allowed to retract the latch bolt when the solenoid is not energized.

In regard to claim 20, Zehrung in view of Lin teaches the door lock, Zehrung discloses a door lock comprising a locking lever (46A), the rod/tip assembly operable on one end of the locking lever, the other end of the locking lever operable on the doorknob.

In regard to claim 21, Zehrung in view of Lin teaches the door lock, Zehrung discloses a door lock wherein the extension of the rod/tip assembly from the solenoid body moves the locking lever to a first lever position that causes the lock to operate in either the fail safe or fail secure mode, the retraction of the rod/tip assembly moving the locking lever to a second lever position that causes the lock to operate the other of either the fail safe or fail secure mode.

In regard to claim 22, Zehrung in view of Lin teaches the door lock, Zehrung discloses a door lock wherein the solenoid is nested in place with in the housing without being affixed to the housing.

In regard to claim 23, Zehrung in view of Lin teaches the door lock, Zehrung discloses a door lock comprising a cradle (10) located within the housing, the solenoid assembly being nested in place with the housing by being nested within the cradle, the solenoid assembly being held in place by surfaces of the cradle and the surfaces of the housing and the cover plate.

In regard to claim 24, Zehrung in view of Lin teaches the door lock, Zehrung discloses a door lock comprising a spring (36) arranged between the solenoid body and the rod/tip assembly, the spring being compressed between the solenoid body and

rod/tip assembly when the solenoid assembly is energized to draw in the plunger, the spring having a spring rate that substantially matches the power curve of the solenoid.

Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kambric in view of Foshee. In regard to claim 25, Kambric discloses an electric door lock comprising of a housing (32) for receiving the internal components of the door lock; a latch bolt (22) mounted within said housing and being movable between partially extended from and retracted into the housing; a door knob (110) mounted to the housing; a solenoid assembly (172) nested within the housing; a hub mechanism (24) within the door knob mounted thereto and a coupling member (144), the coupling member mounted with in the housing and movable between a first coupling position to allow the hub mechanism to rotate when the doorknob is rotated or a second coupling position wherein the hub mechanism is not allowed to rotate when the doorknob is rotated, the hub mechanism retracting the latch bolt when the hub mechanism is rotated; a locking lever (168) mounted within the housing and operably arranged between the solenoid assembly and the coupling mechanism, the locking lever movable by the solenoid assembly between first and second locking lever positions which cause the coupling mechanism to move between the first and second coupling positions. Kambric fails to teach the latch bolt comprises a retractor that melts at an elevated temperature so that the latch bolt cannot thereafter be retracted.

Foshee teaches that it is known to construct a latch that includes a part that melts at an elevated temperature so that the latch bolt cannot thereafter be retracted. It would have been obvious to one having ordinary skill in the art at the time the invention

was made to include the latch bolt retractor capable of melting so that the latch bolt cannot thereafter be retracted as taught by Foshee, since such a modification is well known in the art and would provide a door lock, whereby when a fire occurs, the door lock is urged by high temperature of the fire to hold a latch bolt at a position for fastening the door lock, so that a door mounted with door lock is prevented from being opened during the fire, and spreading of the fire can be confined so as to minimize fire-induced damage.

Claims 26 and 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kambic in view of Foshee further in view of Zehrung (US 6,732,557). In regard to claim 26, Kambic in view of Foshee teaches the door lock, Kambic discloses the claimed door lock except for specifically disclosing that the solenoid assembly comprises a body, a plunger within the solenoid body and a rod/tip assembly mounted to the plunger, the plunger being drawn into the solenoid body when the solenoid assembly is energized, the rod/tip assembly engaging the locking lever to move it between the first and second locking lever positions. Zehrung teaches that it is known to construct a solenoid assembly comprising a body (22), a plunger (24) within the solenoid body and a rod/tip assembly (54A) mounted to the plunger, the plunger being drawn into the solenoid body when the solenoid assembly is energized, the rod/tip assembly engaging the locking lever to move it between the first and second locking lever positions. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Kambic's lock as taught by Zehrung, since such a modification would provide a compact and effective mean to complete a fail safe mode.

Claim 27 rejected under 35 U.S.C. 103(a) as being unpatentable over Kambic in view of Foshee and Zehrung (US 6,732,557). Kambic in view of Foshee teaches the door lock, Zehrung teaches that it is known to construct a door lock comprising a cradle (10) located within the housing, the solenoid assembly being nested in place with the housing by being mounted within the cradle, the solenoid assembly being held in place by surfaces of the cradle and the surfaces of the housing and the cover plate.

Claim 28 rejected under 35 U.S.C. 103(a) as being unpatentable over Kambic in view of Zehrung as applied to claim 26 above, and further in view of Otto, III et al. (US 5,487,289). In regard to claim 28 Kambic in view of Zehrung teaches the claimed invention but Zehrung fails to disclose door lock comprising a conical spring arranged between the solenoid body and the rod/tip assembly, the spring being compressed between the solenoid body and rod/tip assembly when the solenoid assembly is energized to draw in the plunger. Otto shows that is known in the art to construct a solenoid to include a conical spring (57) mounted between the rod/tip assembly and the solenoid body, the spring compressed between the solenoid body and rod/tip assembly when the solenoid assembly is energized to draw in the plunger. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Zehrung's lock as taught by Otto, since such a modification aids in overcoming the attractive forces.

Conclusion


The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kambic, Lin, Charlton, A. L. Pelcin, Frolov, Bruwer et al., Hull, Zehrung, Otto and Foshee.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William Schrode whose telephone number is (571)272-1647. The examiner can normally be reached on Mon-Fri 9AM-6:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Glessner can be reached on (571)272-6843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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BRIAN E. GLESSNER
SUPERVISORY PATENT EXAMINER

Examiner's Attachment

U.S. Patent

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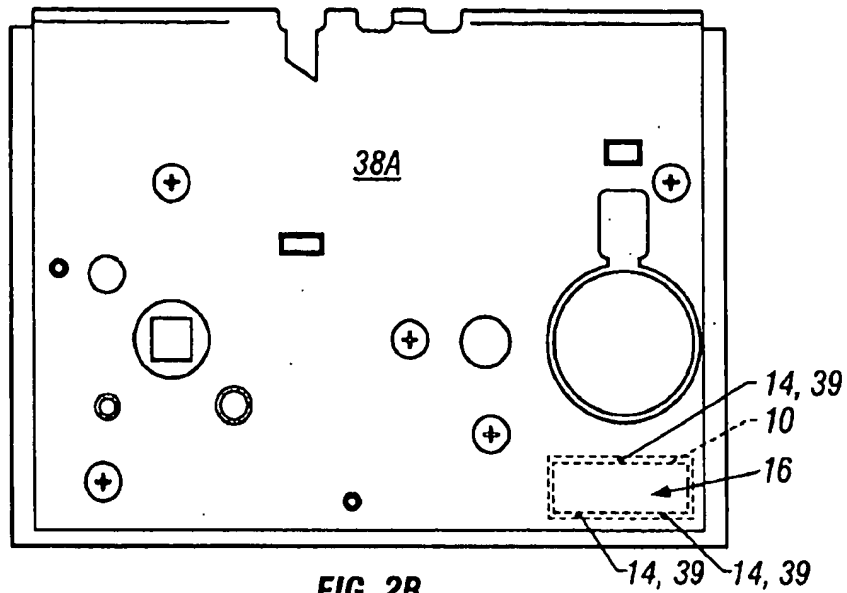


FIG. 2B

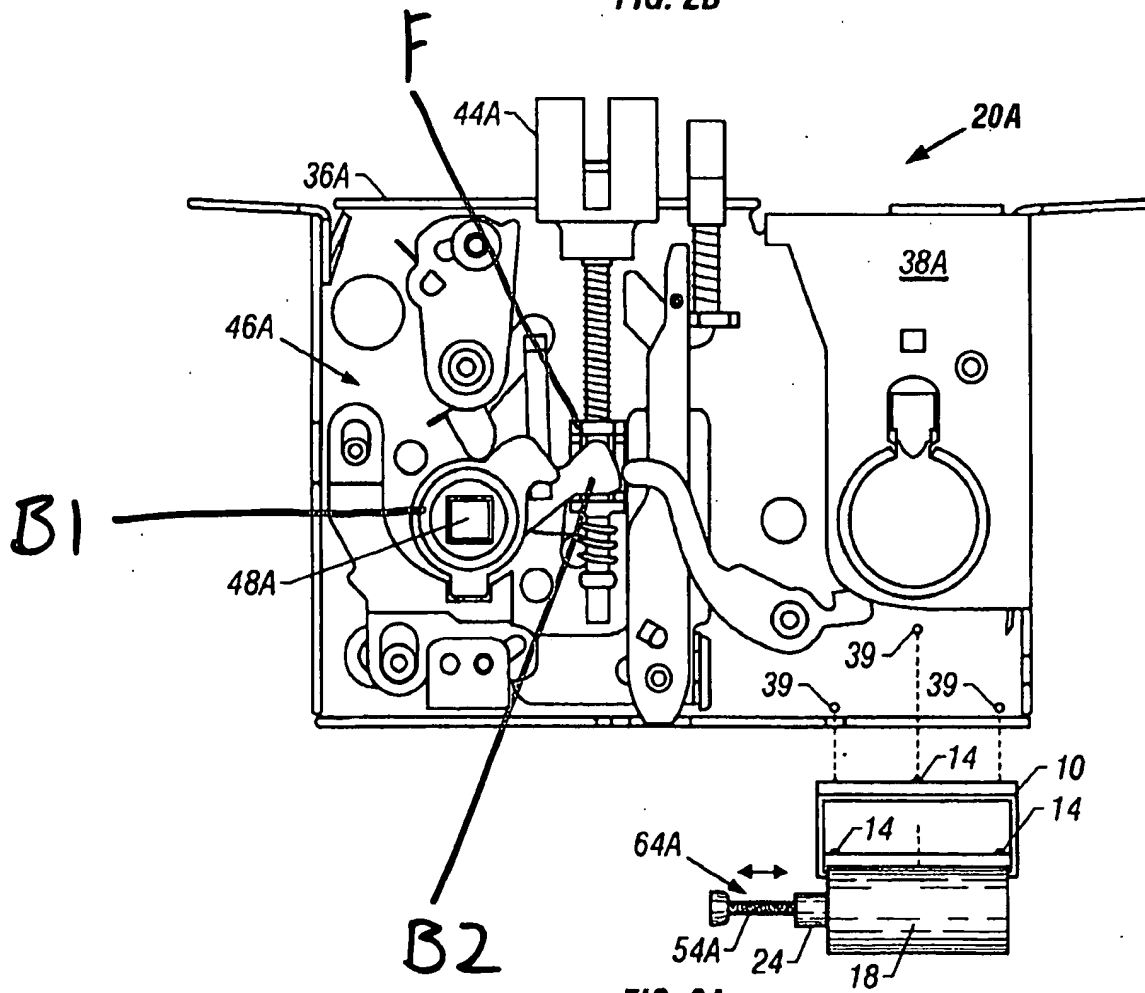


FIG. 3A